TRANSLOCATION OF HISTORIC MONUMENTS AS AN ECONOMIC PROJECT

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Abstract: Translocation project, in conservation perspective, is the transfer of a historic objects in another location. It is performed only in exceptional cases, ie. if this is the only way to save the cultural heritage object from destruction. In the author's opinion, translocation constitutes a specific type of economic project which requires proper management of its subsequent phases. Indication of the main features of such project and specify the stages of implementation, are decisive and perform a vital role in the efficiency and effectiveness of the undertaken translocation operations. Therefore, in this article, author will attempt to identify and indicate the framework of subsequent stages (phases) and strategic operations in implementing translocation projects of historic objects.

Keywords: project, management, translocation, effectiveness, efficiency, historic monuments, cultural heritage.

1 Introduction

During the recent several decades a significant change has been observed in terms of approaching cultural heritage management. The initial care for conserving relics of the past and memorabilia left behind by previous generations was replaced by the activities referring to cultural resources focused on the dedicated conservation manifested in the form of maintain both, their structures and functions. As a result of growing competitiveness and the changing environment, and also in view of the emerging opportunities and threats resulting from e.g. global economy, as well as the increasingly rigorous market conditions, cultural heritage resources have become one of the elements meeting the needs of a modern society.

The period of global economic and social transformations provided the background for the changes experienced in many areas. One of such activities, resulting from the above-mentioned transformations, referred to the need for fighting the degradation of objects of cultural heritage. Currently a significant spatial pressure, has become quite noticeable, which is reflected in:

- the cities, especially their central parts, can usually offer very limited space for construction, therefore it is frequently attempted to substitute their "old' features with the "new' ones,
- the progressing congestion imposes modernization and transport infrastructure development, which can also result in the planned features interfering with the already existing ones,
- the increasing pressure for residential housing development as well as social and economic infrastructure is also visible in rural areas.

Thus, the desire to improve the broadly understood socio-economic infrastructure requires appropriate space which, quite frequently, has been used in a different way (built-up space). It often happens that historic buildings (monuments) represent the features constituting obstacles in the development of new built-up areas or infrastructure and which, in accordance with legal regulations, should be protected and conserved for future generations. Due to their essential importance for maintaining national culture continuity and owing to their potential economic value generating diverse effects, cultural heritage resources should be utilized in an adequate manner and covered by the activities having impact on socio-economic development of particular areas. However, on the other hand, their location can constitute a substantial developmental barrier, e.g. a new function assigned to a particular space. It is not always possible to "include" the existing historic monument in a new concept of a given area management, or attempt to assign new functions to such sites, since it is not conducive with their conservation and protection but, on the contrary, aggravates the above-mentioned problems of conservation and architectural nature.

Hence, such situations have to be approached based on the analysis, assessment and management strategy in terms of decisions about an appropriate management of a particular historic building. Therefore, such approach should cover all elements from the perspective of effectiveness and efficiency of conservation and management policy (protection and guardship of a site, its translocation management process), as well as their socio-economic efficiency (obtaining advantages from presenting the object and using it for other purposes than the originally assigned function).

For this reason the translocation, in the author's opinion, constitutes a specific type of economic project which requires proper management of its subsequent phases. Indication of the main features of such project and specify the stages of implementation, are decisive and perform a vital role in the efficiency and effectiveness of the undertaken translocation operations. Later in the study an attempt will be made to identify and indicate the framework of subsequent stages (phases) in implementing translocation projects of historic landmarks. First, however, the problems related to translocation in its conservation and economic project oriented dimension will be discussed.

2 Translocation project as a conservation and an economic project

The activities involved in the translocation of historic buildings can be analyzed in two ways. Firstly, from the perspective of conservation activities, and secondly in terms of an economic venture.

In the first case translocation, as it has already been indicated, represents a transfer consisting in moving or relocating a building (immobile object), brick-and-mortar or wooden, into a different site [ICOMOS, 2010, p.4]. In conservation terminology the activities consisting in a historic building translocation are frequently related to the notion of recomposition, i.e. "reas-sembling a historic monument (or its parts) using authentic components", which "can take place if a building collapses or is relocated" [Tajchman, 1995, p.156]. Therefore, translocation remains a complicated technological process which requires considering individual characteristics of a given object, such as: the type of construction material, area, volume, weight, the method of building foundation, etc. [Hamberg – Federowicz, 2012, p.21]. In terms of a historic building disassembly the following translocation projects are distinguished:

- demountable constructions – mainly wooden buildings, architectural details, in specific cases brick-and-mortar objects (brick, stone),
- non-demountable constructions – mainly covering brick-and-mortar constructions, wall paintings and stucco [Curtis, 1979, p.2].

Such operations are performed in exceptional cases only, when it is the only method to save the object from damage (see figure 1)

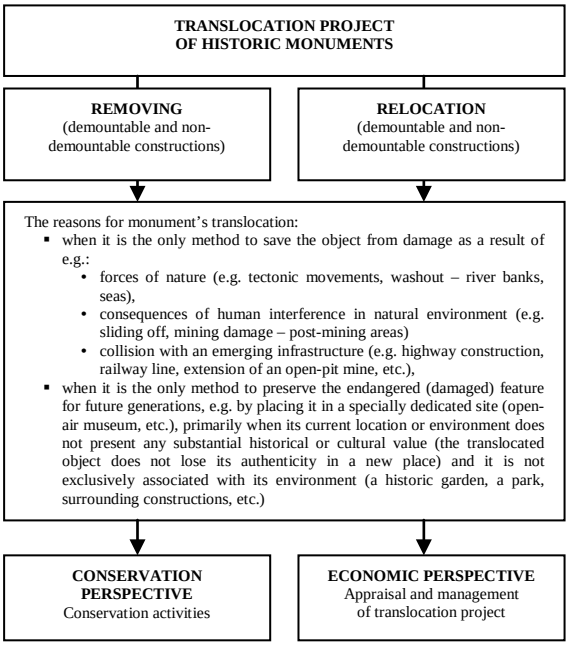

Figure 1. The reasons for the translocation of the historic building and perspective of perceiving it.

Source: Author's compilation

The second approach to translocation refers to the translocation of a historic building in terms of a specific economic project which it undoubtedly is. Translocation remains a part of the main characteristics of a project listed in the publications on management or the assessment of economic (investment) projects (table 1).

Table 1. Translocation of a historic monument in the context of project main characteristics

Main characteristics of the project	The characteristics referring to translocation projects of a historic monument
Specific purpose	The fundamental purpose of translocation projects referring to historic monuments is saving an object from damage and the desire to preserve it for future generations.
High complexity	An object translocation requires coordinating numerous activities at different stages (preparing, implementing, completing) and levels (strategic, operational) of its execution and especially combining conservation approach with the technical part of translocation and the entire management process.
Specified timeframe	Specified timeframe resulting from the availability of specialized equipment, human resources. Sometimes such timeframe results from weather constraints (particular season) or the condition of an object itself (danger of collapsing).
Limited, mainly financial, resources (budget)	Usually executed by public institutions within the framework of strictly defined budgets. The need to manage public resources effectively.
Focus on benefits	The main benefits are of socio-economic nature: result from higher tourist attractiveness of the area to which a particular feature is being moved eliminating the conflict with planned infrastructure, advantages of aesthetic, historical, cultural, etc. nature.
Uniqueness, rareness, individual character	Due to the uniqueness and rareness of historic monuments themselves and their environment a translocation project presents the same character (different geographic, geological, technological, etc. conditions.)
Risk of failure	The risk of damaging the relocated object, fracturing its structure or elements while transporting, complications prolonging the project implementation, which could thus be reflected in its costs.
Usually the involvement of people and institutions representing diverse specialties	The implementation of a translocation project requires both coordination and consultations with people and institutions representing various specialties: architects, conservation officers, technologists, engineers, specialists in project and finance management, etc.

Source: author's compilation based on [Janasz, Wiśniewska, 2014, p.56; Little, Mirrlees, 1982, pp.3-6; Meredith, Mantel, 2003, pp. 8-10; Goblet, 2006, pp.34-38].

Based on the above presented background an attempt can be made to define the concept of a translocation project in an economic dimension. Therefore, a translocation (relocation) project of a historic monument is approached as a one-time, unique venture characterized by limited timeframe and budget, the implementation of which in an effective and efficient manner is supposed to result in preserving a particular historic monument from damage and passing it over to future generations in a proper shape.

A translocation project, like any other economic venture, is characterized by phases (stages) in executing subsequent activities intended for implementation. Referring to one of the most popular and also the best visually and practically presented proposals of a project lifecycle, suggested by UNIDO [Behrens, Hawranek, 1993, pp. 9-10] representatives, the following phases can be distinguished: preparatory (pre-investment) phase, implementation (investment) phase, as well as operation and completion phase. In case of translocation projects preparatory phase remains definitely the most important stage to carry out. Therefore, the divisions recommended by Ch. Chapman and S. Ward [2003, p. 19] can be suggested as the development of the previously followed approach. They distinguish four phases within the framework of which preparatory activities cover two stages, i.e.: the initiation and the concept creation phase and also the planning phase. Furthermore, the authors identify the execution (implementation) phase and the closing (exploitation) phase.

It should be remembered that with reference to moving projects we can come across two groups of objects, i.e. demountable and non-demountable ones. This division, in relation to translocation types, i.e. relocation (performed more often in case of demountable buildings) or moving (primary referring to non-demountable objects), shall decide about the subsequent activities planned within the framework of a particular venture. In case of demountable constructions the project oriented activities will concentrate on disassembling, transport and reassembling an object in its destination. With reference to a non-demountable feature the focus is on specifying the technology adequate for the moving or relocation process and next on shifting the historic monument (table 2). It should also be emphasized that from a technological and technical perspective translocating a non-demountable feature remains a more complex and more difficult to perform – the need to move the entire object without damaging it. Table 2 presents basic project lifecycle (management) stages (economic approach) along with the subsequent phases of the correctly programmed and carried out conservation process (conservation oriented perspective). Standard activities planned for translocation projects of demountable and non-demountable historic monuments are also presented in relation to the above-mentioned two approaches.

Table 2. Project management phases in the context of conservation process and translocation types of a historic monument

Project management phases		Phases of a historic monument conservation process	Translocation of a demountable object	Translocation of a non-demountable object
Preparatory phase	Initiation and concept creation phase of a project	Comprehensive knowledge of a historic monument	The choice of an object for translocation	The choice of an object for translocation
		Valuation of a historic monument		Analysis of the building's technical state and geotechnical conditions
	Project planning phase	Conservation oriented conclusions and guidelines	Preparatory works (e.g. inventory and marking particular components of an object, preparing its environment, planning its transport route, etc.)	Development of a translocation object
		Conservation project (planning all types of works indispensable for the complex		

	solution of all conservation problems)		
Implementation phase (execution)	Project implementation along with its author's supervision	Disassembling of an object	Protecting and strengthening the construction system of a translocated historic monument
		Preparing components for transport and reassembling (protection, conservation, strengthening and reconstruction of the construction fragments damaged during an object disassembly)	Reassembling and preparing equipment and mechanisms necessary to transport an object
		Transport	Execution of the translocation operation
		Object reassembling in its destination	Object foundation in its destination
Operation and/or completion phase of a project	Development of post-completion documentation	Development of the project post-implementation documentation	Development of the project post-implementation documentation
		Using an object in its new location (previous or new function)	Using an object in its new location (previous or new function)

Source: author's compilation. The terminology of conservation stages according to the approach suggested by J. Taichman [1995, p. 150].

The information presented in table 2 illustrate that, in general terms, the conservation phases of a historic monument are the same as the standard ones typical for an economic project management. However, while in case of strictly economic projects each phase is approached as equally important from the perspective of the entire project management process, in case of the conservation type of projects the preparatory phase is primarily emphasized. In its course numerous specialist documents are being developed, e.g.: the analysis of a historic monument, construction-conservation inventory, historical studies (archeological, decor, architectural ones, etc.), valuation of an object, to be followed by very precise conservation oriented guidelines, which have impact on a technical design and the execution of construction-conservation works referring to the historic monument. As J. Tajchman emphasizes "considering the specific nature of all such operations, depending on the general concept, type of a historic monument and its preservation condition, as well as respecting its authentic substance, differentiates a conservation oriented project from a typical construction one, referring to reconstruction or major renovation of a building" [Tajchman, 1995, p. 156].

Based on the above presented background, we can indicate that, a translocation project, similarly to any other one, requires an adequate management process to be carried out, i.e.: sufficient material, human, information resources in the preparatory phase (planning and organizing of a translocation project), performing specialized operations in its implementation phase (executing physical translocation) and proper project completion. Having taken such perspective, the focus of a project team is concentrated on the effectiveness and efficiency of the activities planned for execution within the framework of the carried out project.

It should, however, be emphasized that a translocation project of a historic monument is also characterized by a strictly economic dimension. Such project can generate multi-faceted effects, i.e.: economic, social, cultural, aesthetic, etc., before, during and after its implementation. From such perspective it seems significant to determine both financial and socio-economic efficiency of a project, i.e. attempt answering the following question: To what extent (if at all), the effects of translocation can compensate for the usually high costs of translocation.

For these reasons it is crucial to conduct appropriate identification and analysis of strategic activities within the framework of particular phases in a translocation project. In the opinion of the author of the presented study, logistics activities plays an important role among them. Therefore, the next part of the article presents an attempt of their identification and general characteristics.

3 Strategic decisions in translocation projects with particular focus on logistics activities

Despite the fact that a translocation project itself is not a strictly business (profitable) one, still the plan structure of its implementation covers numerous activities of such strategic nature. These can include:

- set a goal of the project,
- determine organizational structure of the project,
- determine the project manager and the project team,
- specify the schedule and milestones,
- establish the project budget ,
- determine the control and monitoring methods.
- identify the main risks of the project.

Above decisions can have a significant impact on the efficiency, effectiveness and efficacy of the entire translocation project. This indicates, that the actions implemented as part of the project may include several processes and activities relating to many areas of broadly understood management. Among them, can be identified e.g.:

- time management,
- human resource management
- risk management,
- process management
- finance management,
- logistics management.

In case of translocation projects one of the most important areas is the appropriate management of logistic activities. The Council of Supply Chain Management Professionals (CSCMP) define logistics as the process involving planning, implementation and monitoring of an effective and efficient transfer and storage of goods (loads), services and the associated information from the place of origin to the point of their consumption in order to meet client's expectations [Vitasek, 2013, p.117]. While adopting the particular components of this definition for the purposes of translocation projects it should be emphasized that a specific type of item (load) can be involved, i.e. a transported historic monument. It is mainly accompanied by the transfer of specialist, technical and technological information. The existing location of an object is its place of origin, whereas the consumption (usage) site is the new destination of its foundation. Transfer streams remain the elements connecting overall phenomena and processes related to translocation, while the logistics operations, in the author's opinion, are of great significance in this area.

The subject literature on logistics lists numerous logistics operations supporting the decision-making process. H.Ch. Pfohl [2010, pp. 8-10] discusses general business logistics to be performed in connection with the implementation of logistics processes: storage, transport, reloading, development and transfer of orders and packing and marking. He also attracts attention to the fact that the first three items represent major processes in the flow of goods. The others are of supplementary nature. Similar logistics activities presents E. Kulińska [2010, p.76] who distinguishes e.g.: storage, transport, accepting goods, shipment of goods, waste management, development of customer orders. inventory control, demand forecasting, production planning, purchase. As it has already been mentioned, translocation is not a mass type of activity, hence the particular logistics operations can occur, within the framework of a particular translocation project, with diverse intensity. Some of them, e.g.: demand forecasting or production planning, in case

of translocation, are nor present at all. Table 3 lists the examples of translocation projects of historic monuments and logistics operations associated with them.

Table 3. Examples of translocation projects of historic monuments – reasons, costs and basic logistics activities.

Name of the object	Location (city, country)	Reason of translocation	Cost of translocation	Logistics activities					
				Reloading (including loading and unloading)	Transport / displacement	Storage / warehousing	Packing and marking	Order development and execution	Transfer of information (technical, managerial, etc.).
Non-demountable constructions									
The old management building of the former machine factory Oerlikon (Maschinenfabrik Oerlikon - MFO)	Zurich (Oerlikon district), Switzerland	The collision with the route of planned transport infrastructure (planned construction of a railway tunnel)	$ 12.7 million	X	X	-	-	X	X
Gay Head Lighthouse	Aquinnah (Wyspa Martha's Vineyard, Stan Massachusetts), USA	Due to erosion of the shore	approx. $ 3.5 million	X	X	-	-	X	X
Cape Hatteras Lighthouse	Removing of Cape Hatteras Lighthouse, Buxton, USA (North Carolina	Due to erosion of the shore	$11.8 million	X	X	-	-	X	X
Fortified 750-year-old Emmaus Church	Heuersdorf, nearby Leipzig, Germany	The village of Heuersdorf was set to disappear, swallowed up by a massive brown coal mine.	€ 3.0 million	X	X	-	-	X	X
Military bunker SP-96 (part of the fortifications called „Olsztynecka positions“)	Witramowo nearby Olsztynek, Warmian-Masurian Voivodeship Polska	The collision with the route of planned transport infrastructure (Expressway S7 Warsaw-Gdańsk)	approx. 2.0 million of PLN	X	X	-	-	X	X
Demountable constructions									
The Wheelwright House (wooden house, example of regional architecture of Upper Lausitz)	Wigancice Żytawskie nearby Zgorzelec, Lower Silesian Voivodeship, Poland	The village of Wigancice Żytawskie was set to disappear, swallowed up by a brown coal mine Turów.	approx. € 0,25 million	X	X	X	X	X	X
The Abu Simbel temples	Abu Simbel, a village in Nubia, southern Egypt,.	Temples were under threat from the rising waters of the Nile that were about to result from the construction of the Aswan High Dam	approx. $ 40 million	X	X	X	X	X	X

Source: author's compilation based on online sources [APR 2015, National Park Service 2015, Spiegel Online 2007, The Telegraph 2012, Isida Project 2014, Zagroda Kołodzieja 2015, TVN24 2010].

As shown above, logistics activities can fulfill an important role for the implementation of the translocation project. Their importance is mainly visible in case of translocating demountable objects, within the framework of which the activities related to disassembly, transport and storage are intensified. In some cases, determining the correct level and standards of the logistics services can turn out one of the most important strategic decisions having crucial impact on the project schedule or overall costs involved in the entire project. Among strategic logistics decisions of crucial significance for a translocation project of a historic monument the following can be listed e.g.:

- in terms of location – selecting an object destination, choosing the storage site for the relocated object components,
- in terms of transport – selecting the means of transport, choosing between using own transportation, or outsourcing it from external transport service providers,
- in terms of information transfer – selecting an information transfer system within the framework of a project, having considered the needs of particular project stakeholders (e.g. investor, conservation officer, chief designer of operations, transport company, etc.).

The above presented discussion confirms that logistics operations in a translocation project of a historic monument can take the form of decisions made at both an operational level and a strategic one. Especially in the latter case there is a need for their proper planning. It should be manifested in two forms:

- as an organizational separation of logistics operations in the project internal structure (self-service in terms of the execution of logistics operations)
- as the identification of major logistics activities commissioned to the cooperating, outsourced entities (e.g. subcontractors).

Usually, however, a mixed structure turn out to be the best solution in this matter.

4 Conclusions

Translocation of historic monuments are very complex projects, particularly from a technological and technical point of view. In addition, their internal structure and scope, in many cases, require to coordinate operations performed by several entities and meet very restrictive requirements and recommendations, frequently imposed by the legislation in force or specialized conservation regulations. Among the strategic activities planned for implementation an important role is played by logistics operations. The presented discussion allows concluding that the purpose of logistics activities in translocation projects is to ensure multifaceted and often multi-entity coordination and cooperation. It is carried out in the process of subsequent phases made up of the implemented projects focused on the transfer of a specific material resource taking the form of a translocated historic monument.

The problems discussed in the study go along with the trends in the development of project management and logistics management related to its implementation in various ventures within the sphere of public or socio-economic services. Translocation projects of historic monuments definitely remain one of them, whereas the conducted general analysis covering the identification of main features, strategic operations and logistic activities in stages of project is supposed to extend the knowledge about management in atypical applications. The intention of the article's author was to initiate further, in-depth research in this field, whereas the article represents an element of more extensive discussion on the importance of project management and logistic aspects in the functioning of certain cultural institutions (museums, open-air museums) and managing cultural heritage.

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